

April 16th, 2021

KEY TAKEAWAYS

- Cases remain relatively flat across the Commonwealth overall, with most health districts split evenly between declining, plateau, and slow growth trajectories
- Three health districts are now experiencing a surge in cases, an increase from one health district last week
- The model's Adaptive Fatigue Control B.1.1.7 scenario shows the potential for a significant peak this summer, larger than any previous peak
- Hospitalizations are beginning to increase among Virginians age 50-69. Similar patterns appear in other states, with hospitalizations also increasing among those age 20-49 years in states experiencing surges.

17 per 100k

Average Daily Cases
Week Ending April 11, 2021

99 per 100k

Potential Peak Average
Daily Cases, Week Ending
July 4, 2021 with B.1.1.7
Variant & Pandemic
Fatigue

13 per 100k

2020 Summer Peak
Week Ending Aug 2, 2020

68 per 100k

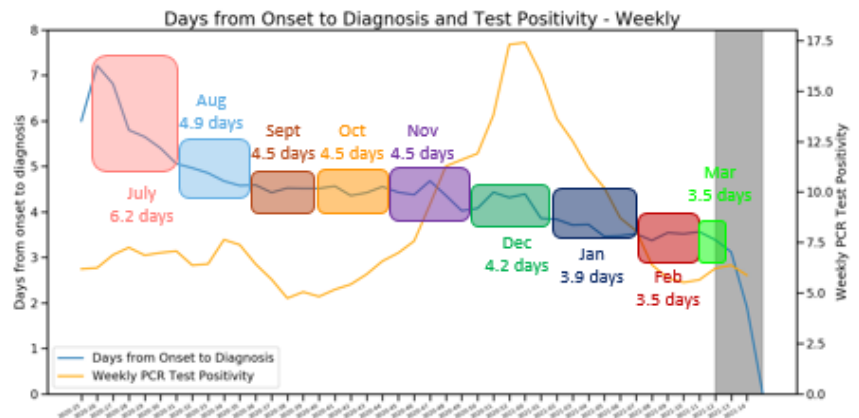
Highest Peak Average
Daily Cases
Week Ending Jan 24, 2021

KEY FIGURES

Reproduction Rate (Based on Confirmation Date)

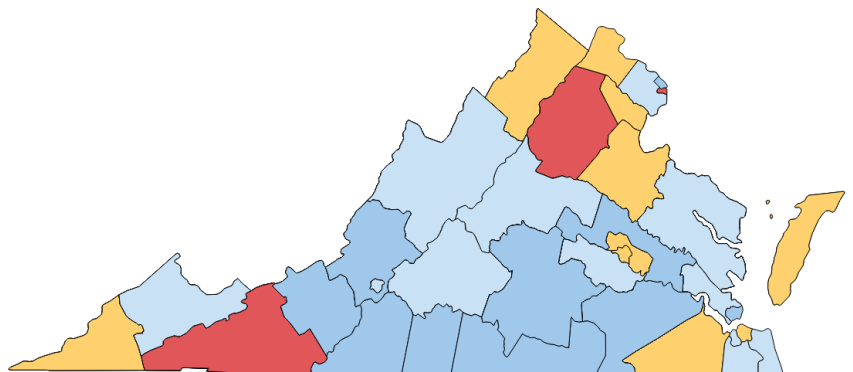
Region	R _e Apr 12	Weekly Change
State-wide	1.009	0.066
Central	0.971	-0.013
Eastern	0.946	0.026
Far SW	0.947	-0.068
Near SW	1.027	0.156
Northern	1.063	0.085
Northwest	1.026	0.151

Case Detection



Growth Trajectories: 3 Health Districts in Surge

Status	# Districts (prev week)
Declining	10 (12)
Plateau	12 (11)
Slow Growth	10 (11)
In Surge	3 (1)



THE MODEL

The UVA COVID-19 Model and the weekly results are provided by the UVA Biocomplexity Institute, which has over 20 years of experience crafting and analyzing infectious disease models. It is a (S)usceptible, (E)xposed, (I)nfectious, (R)ecovered epidemiologic model designed to evaluate policy options and provide projections of future cases based on the current course of the pandemic.

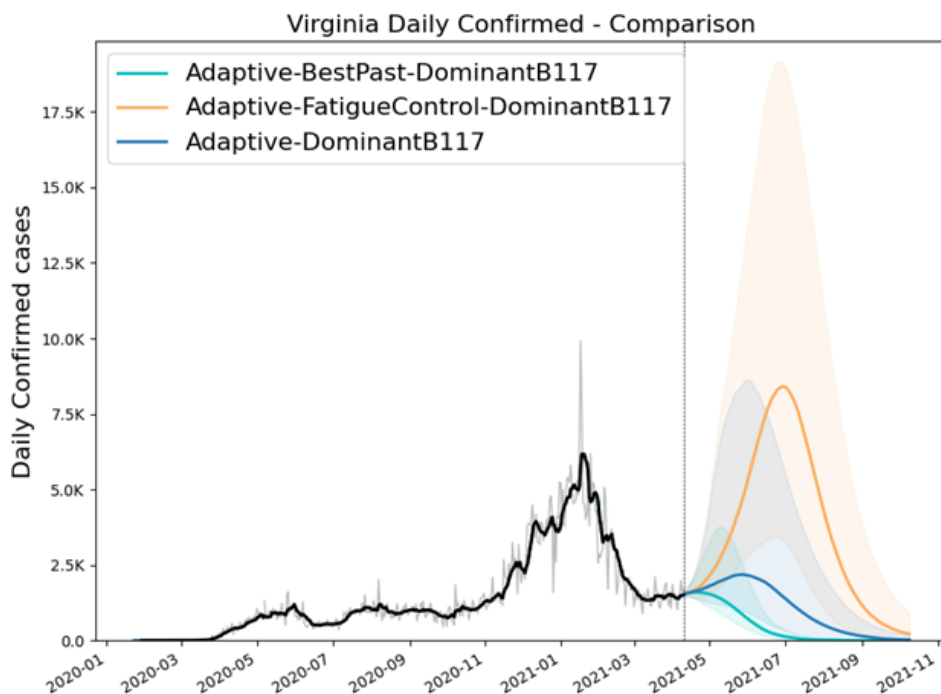
COVID-19 is a novel virus causing a global pandemic and response. The model improves as we learn more about it.

THE PROJECTIONS

The UVA team continues to improve the model weekly. The UVA model uses an "adaptive fitting" methodology, where the model traces past and current trends and uses that information to predict future cases at the local level. The model incorporates projections on the impact of vaccines, which will improve over time. Since the B.1.1.7 Variant has become dominant, the model includes increased transmission and severity associated with this Variant of Concern. The model also includes "what-if" or planning scenarios. The "Fatigued Control" scenario identifies the highest transmission rates seen since May 2020 and projects those forward. The "Best Past" scenario does the opposite, identifying the lowest transmission rates seen since May 2020, projecting them forward.

MODEL RESULTS

With the B.1.1.7 variant becoming predominant, the model shows a slight rise in new weekly cases along the current course, but warns of a surge in cases that could occur if Virginians relax precautions. Under the current course, model scenarios show that cases peaked at **68 average daily cases** per 100,000 residents during the week ending **January 24th**. However, under the Fatigued Control - Dominant B.1.1.7 scenario, if Virginians relax their behavior as Variants of Concern take hold, cases will reach a higher peak with **99 average daily cases** per 100,000 the week ending **July 4th**. To lessen the projected peak, we must give vaccines time to have an impact, especially as the B.1.1.7 variant becomes the predominant strain in Virginia. **Do your part to stop the spread. Continue to practice good prevention and get vaccinated when eligible.**



AVOIDING A SURGE

Recent weeks have brought growing surges in hotspots across the country. Michigan is experiencing an increase in cases at an alarming rate. Colorado, Minnesota, and Puerto Rico are also in surge trajectories.

So far, Virginia has staved off another surge. However, the model's confidence bounds are wide, showing that even though the median (most likely) scenario is another springtime peak smaller than the peak in January 2021, alternate paths forward do exist. As seen in the district-level snapshot on the right, there is still the possibility for a significant surge in the spring or early summer, even under the Adaptive scenario.

Vaccination Rates in the Region

Vaccinations are key to avoiding another surge. Not only are Virginia's vaccine efforts important, but the work of our neighboring states impacts us as well.

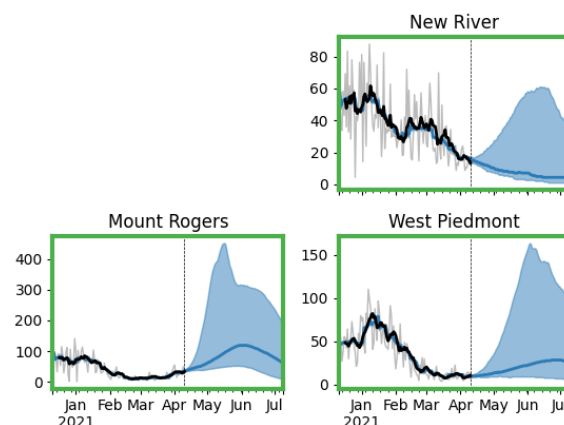
Over 41% of Virginians are now either partially or fully vaccinated, a similar rate as in Maryland and D.C. and higher than the national rate (37%). However, our neighbors to the south and west are lagging behind. In West Virginia, 35% of the population is at least partially vaccinated and in Tennessee, only 32%. When the vaccination rates in our neighboring states are low and slowing, Virginians are also impacted, particularly those near state borders.

Younger Hospitalizations on the Rise

As a larger share of Virginians over age 70 are vaccinated, hospitalizations among this age group are declining. This is good news and is why the population age 65+ was prioritized for early vaccination efforts. As we would have hoped, we've seen a drop in hospitalizations statewide since January. Unfortunately, along with plateauing case rates, the decline in hospitalizations has since halted. Virginians aged 50-69 are now experiencing more hospitalizations than they were last summer and fall. The rise in variants of concern is likely driving this increase in hospitalizations.

Similar patterns appear across the nation. Hospitalizations in Michigan increased dramatically in recent weeks, most notably among those age 20-49. Pennsylvania lags Michigan but appears to be following suit. While hospitalizations in Virginia currently remain low among those under 50, we may soon follow this pattern too.

To avoid an increase in negative outcomes across the Commonwealth, including among the population under 50, all Virginians should get vaccinated when eligible.



Confidence bounds for the Adaptive-DominantB117 scenario are wide. Even under this scenario, which does not assume relaxed behavior associated with the "FatigueControl" scenario, the possibility for a significant surge in the summer months still exists.

